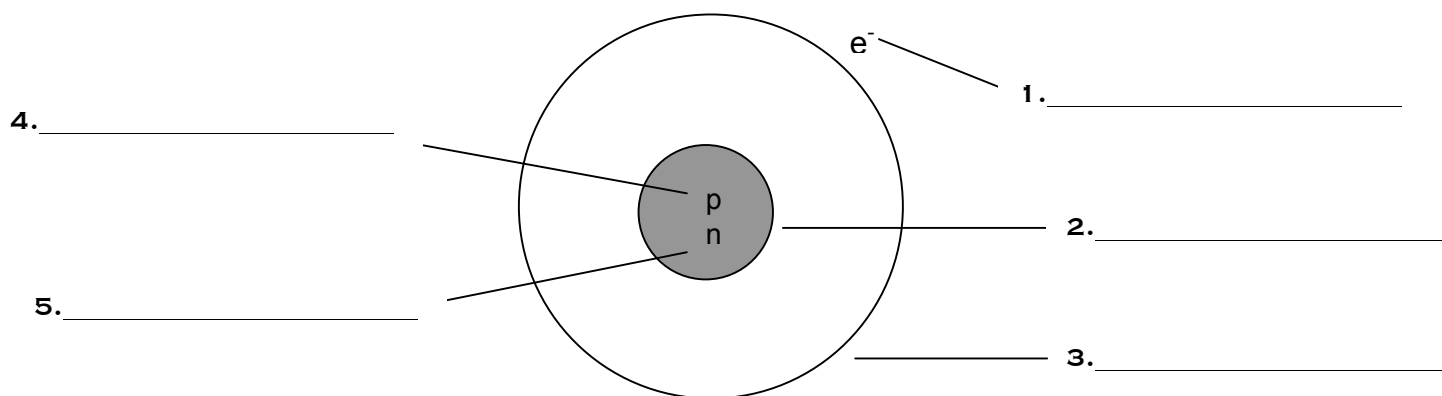


Chemistry Review

Directions: Label the parts of the atom.



Directions: Determine if the statement is true. If it is not, rewrite the italicized part to make it true.

6. An element is a substance that *can be* broken down into simpler substances. _____
7. On earth, *92* elements occur naturally. _____
8. Only four elements — *carbon, hydrogen, oxygen, and nitrogen* — make up more than 96 percent of the mass of a human. _____
9. Each element is abbreviated by a one or two letter *formula*. _____
10. The properties of elements are determined by *the structures of their atoms*. _____

Directions: Answer the following question in the space provided.

11. What is the maximum number of electrons in each of the following energy levels: first, second, third?

Directions: Write the type of substance described. Use these choices: compound, element.

_____ 12. H_2O , a liquid that no longer resembles either hydrogen or oxygen gas

_____ 13. A substance that can be broken down in a chemical reaction

_____ 14. Carbon, the substance represented by the symbol C

Directions: Complete the table by checking the correct column for each description.

Statement	Ionic Bond(s)	Covalent Bond(s)
15. Found in the compound NaCl		
16. Increases the stability of atoms		
17. Results in the formation of a molecule		
18. Is formed when atoms share electrons		

Directions: For each statement below, write true or false.

_____ 19. In a water molecule, electrons are shared equally between the hydrogen atoms and oxygen atom.

_____ 20. The attraction of opposite charges between hydrogen and oxygen forms a weak oxygen bond.

_____ 21. Because of its polarity, water can move from the roots of a plant up to its leaves.

_____ 22. Water changes temperature easily.

_____ 23. Unlike most substances, water expands when it freezes.

_____ 24. Carbon atoms can bond together in straight chains, branched chains, or rings.

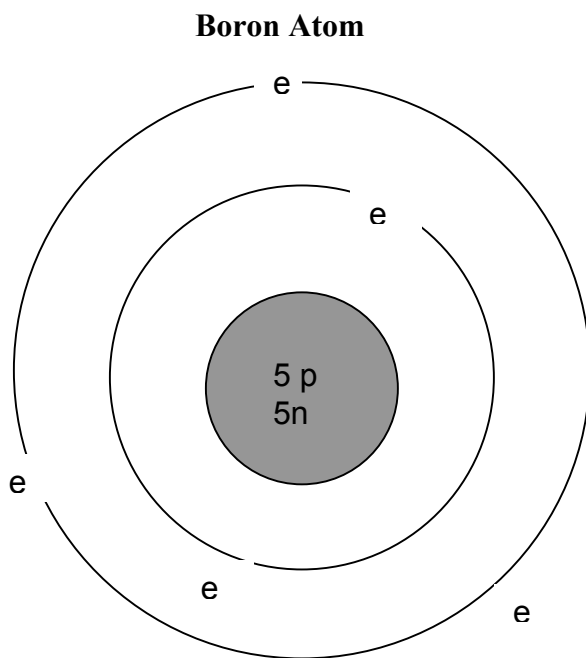
_____ 25. Large molecules containing carbon atoms are called micromolecules.

_____ 26. Cells use carbohydrates for energy.

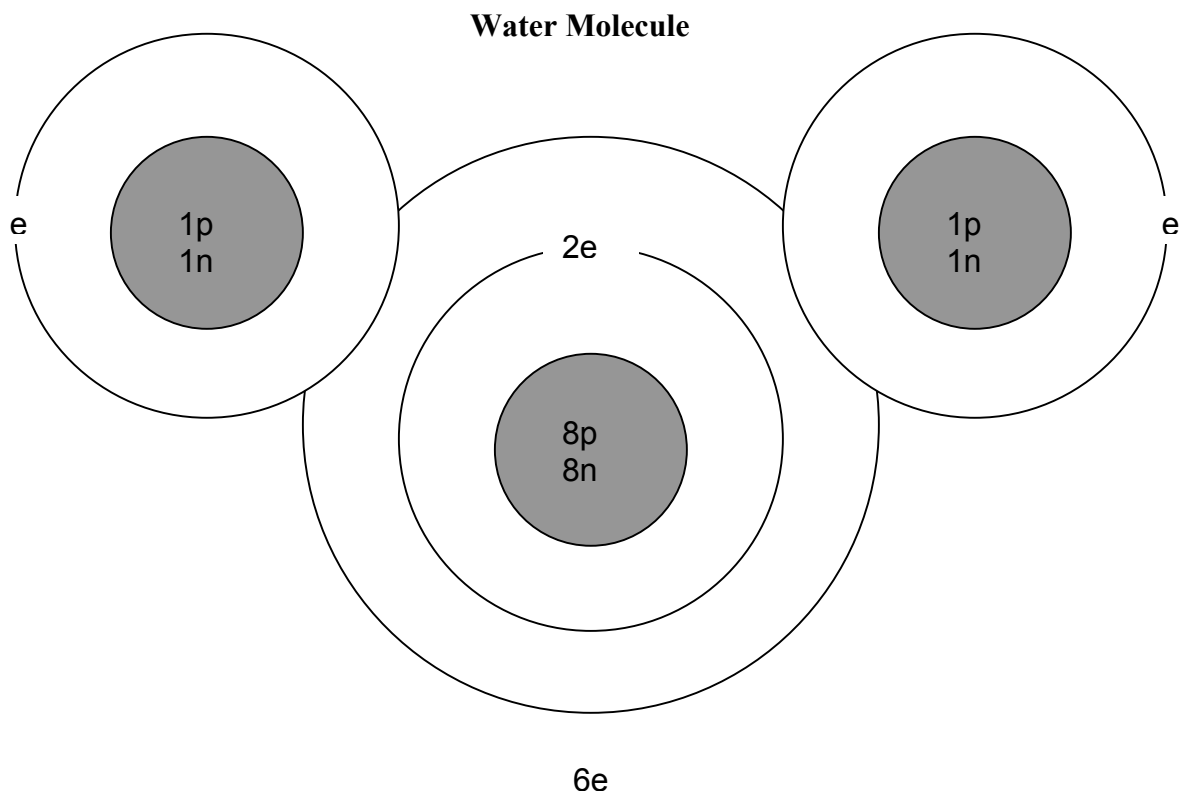
Directions: Complete the table by checking the correct column for each description.

Description	Lipids	Proteins	Nucleic Acids
27. Made up of nucleotides			
28. DNA and RNA			
29. Produce proteins			
30. Commonly called fats and oils			
31. Made up of amino acids			
32. Used for long-term energy storage, insulation, and protective coatings			
33. Contain carbon, hydrogen, oxygen, and nitrogen			

Directions: Use these diagrams to complete the sentences and answer the questions.



33. An atom of boron contains _____ protons, _____ neutrons, and _____ electrons.



34. In a water molecule, each hydrogen atom shares _____ electron(s) with the oxygen atom.

35. What kind of bond is formed between the atoms of a water molecule?

36. How does the bond affect the stability of the atoms?

Directions: Fill in the correct term from list below in the space provided.

Atom	Carbohydrate	Hydrogen bond
Nucleic acid	Nucleotide	Polar molecule
Protein	Solution	

_____ 37. Subunit of nucleic acids

_____ 38. Compound used by cells to store and release energy

_____ 39. Mixture in which a substance dissolves into another

_____ 40. Smallest particle of an element that has the characteristics of that element

_____ 41. Molecule with a positive end and a negative end

- _____ 42. Weak bond formed between water molecules, due to their polarity
- _____ 43. Polymer made of amino acids that is essential to all life
- _____ 45. Large molecule that stores information in cells